

5. (14pts) Single mom Fiona, who has two children, files income taxes using the “head of household” filing status. She earned \$54,000 in wages, \$690 in interest, and deposited \$7,000 into a retirement account; she paid \$6,200 in mortgage interest, \$1,400 in property taxes, \$3,100 in state income taxes and donated \$300 to charity.

a) Find Fiona’s gross income and adjusted gross income.

b) Use the table below to first determine Fiona’s taxable income (don’t forget the exemptions) and then find the tax on this income.

Tax rate	Head of Household
10%	up to \$13,250
15%	\$13,250 to \$50,400
25%	\$50,400 to \$130,150
28%	\$130,150 to \$210,800
33%	\$210,801 to \$413,350
35%	\$413,351 to \$441,000
39.6%	above \$441,000
Standard Deduction	\$9,300
Exemptions (per person)	\$4,050

6. (14pts) Angelo would like to save for a \$14,000 motorcycle.

a) How much should he deposit every week into an account with 4.75% interest, compounded weekly, in order to have \$14,000 in five years?

b) How much of the final amount is from deposits and how much from interest?

7. (32pts) True story: physician assistant Hayley Arceneaux spent three days in orbit on a SpaceX spacecraft. Made-up part: to house all the memorabilia connected to this flight, she decided to build an addition to her house costing \$104,000, financing it with a 15-year loan at interest rate 2.34%, compounded monthly.

a) What is her monthly payment on the loan?

b) What are her total payments over the course of the loan? How much of this amount is for interest?

c) How much of her first payment goes toward interest, and how much towards the principal?

d) What is the balance on the loan after 9 years?

8. (8pts) Bologna Bank is offering a 2.34% interest rate on an account that is compounded daily, while Salami Savings has an account with interest rate 2.32%, compounded quarterly. Which account is the better deal?

Bonus. (10pts) Darius invested \$5000 in a mutual fund. Six years later, this investment had value \$13,500. Assuming annual compounding, at what annual rate did this investment grow?